

**What To Do With Unprofitable Cotton Fields.**

Editors Progressive Farmer:

In many parts of the South cotton has, on account of the almost total disappearance of vegetable matter from the soil, ceased to yield satisfactory crops of lint. In some neighborhoods a soil or root parasite has lately attacked the crop and threatens to make it impossible to grow cotton on such fields. What to do with fields which can no longer grow cotton is a serious problem.

Very few cotton farmers grow the bacon consumed by themselves and their hands. Still fewer grow the forage required by their stock. A natural and promising use for such sick cotton fields is to turn them into pastures for hogs, mules and other stock. Cotton is commonly grown upon light, sandy loam. Such soil in the hot and droughty climate of the cotton region will not grow the tame grasses esteemed in the North. But in Bermuda grass the Southern farmer has a perennial grass of the best quality and one that will grow upon any soil that will grow cotton. With Bermuda grass for summer and crimson clover for winter pasture, the Southern farmer may have an all the year round pasture that should carry ten medium weight pigs all the time.

In the United States, north of Florida, Bermuda grass does not bear seed. The grass is propagated by root cuttings. Three barrels of these will plant one acre. The grass is so common along road sides that the roots can usually be had for the gathering. A Bermuda pasture may be set at any time of the year. But early spring is best. The field should be furrowed at about five feet apart and the root cuttings dropped into the furrows and covered two or three inches deep. A little white clover and Bokhara clover seed planted at the same time will give an agreeable variety to the pasture. The field should not be pastured until the grass has run through the vacant spaces. If the land is very poor, nitrate of soda at the rate of one hundred pounds per acre should be applied at time of setting the grass, or as soon as growth begins. In any case an abundant supply of lime, potash and phosphoric acid must be furnished. All worn cotton soils in the upland region are deficient in lime. Without this no clover will succeed. Potash is best supplied to such soils in the form of kainit. A good fertilizer is kainit and acid phosphate in equal quantities. Of the mixtures, apply as a top dressing every spring about five hundred pounds per acre. About September 1st of each year broadcast upon the Bermuda sod about forty-five pounds of crimson clover seed in chaff for each acre of pasture. No covering or preparations for the clover seed are necessary. By taking stock off, the pasture from March 15th till May 15th, two tons of hay per acre can be harvested. The pasture herein described may be still further improved for hogs by broadcasting upon it about one ounce per acre of the seeds of parsley, thyme and sage—plants of which hogs are fond. The flavor of these herbs will give a "gamey" flavor to the meat.

After the pasture has been for some years in use the land may be broken up and again put into cotton if desired. The root parasite will be starved out and the soil filled with vegetable matter which will carry through several crops of cotton. Instead of using crimson clover as above-described, we may use the sand or hairy vetch. The common or Scotch vetch is also good. The spotted clover is excellent and is in value next to crimson clover.

If cotton growers will give this plan a fair trial, they will have cause to bless instead of curse the root parasite which has invaded their fields.

GERALD McCARTHY,

Botanist North Carolina Department of Agriculture, Raleigh.

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**A Fertilizer Experiment on Corn.**

Editors Progressive Farmer:

It will soon be time to plant corn again and the question of fertilizers is one which is always coming up. The experience of those who have made careful tests with different chemicals and other manures is always helpful in the way of determining what is best to apply. It happens that in the sandy loam lands of Tennessee Mr. John Bodenmann, of Hohenwald, last, year devoted an acre of land to one testing of some commercial fertilizers on a corn crop.

He divided one acre of land into three plots of exactly one-third acre each, numbering them 1, 2 and 3.

On plot No. 1 no fertilizer of any kind was put. On plot No. 2 there was put two hundred pounds of acid phosphate, forty pounds muriate of potash and sixty pounds of nitrate of soda. On plot No. 3, two hundred pounds of acid phosphate and sixty pounds of nitrate of soda, omitting the potash entirely. The land was well prepared and the planting done on May 1st. At first the season was good and the corn came up and started off well. A cold spell, when it was two weeks old, checked its growth, and from the middle of June until the end of July there was no rain whatever, and scarcely a good rain all the summer. These circumstances were very unfavorable. The corn was stunted when it ought to have been growing rapidly. The cultivation was thorough throughout the growing season and alike on all the plots.

When the crop was gathered and carefully measured the first week in December it showed plainly the result of the fertilizers that were applied. The following table will speak for itself:

Plot.	Fertilizer application per acre in pounds.	Yield in bus. per acre.	Incr's. over unfert'd plots.
No. 1.—No fertilizer.....		9	....
No. 2.—600 lbs. acid phosphate, 120 lbs. muriate of potash, 180 lbs. nitrate of soda .....		32	23
No. 3.—600 lbs. acid phosphate, 180 lbs. nitrate of soda.		23	14

It will be seen that plot No. 1, which had no fertilizer, only yielded at the rate of nine bushels per acre, which is almost nothing, and did not pay for the time and labor expended. Plot No. 3, which had at the rate of six hundred pounds of acid phosphate and one hundred and eighty pounds of nitrate of soda per acre at the rate of twenty-three bushels of corn per acre, which was at increase of fourteen bushels over the unfertilized plot and it was also of better quality. From plot No. 2, there was gathered at the rate of thirty-two bushels per acre, showing the additional benefit from the muriate of potash applied to it, being an increase of twenty-three bushels of corn over the plot having no fertilizer and nine bushels over the one that had only phosphoric acid and nitrogen applied to it. It is easy to see that all the fertilizers paid well, but the potash best of all. Its cost was about \$2.50, and the nine bushels of corn was worth about \$4.50, which leaves a net profit of \$2. Had the season been favorable, with abundant rains at the proper time, the fertilizers would have had still more marked effects.

Another comparison that can be made is between these three plots and a field of twelve acres of corn next to them which was manured with a good grade of mixed fertilizer from Nashville, and from which only one hundred and fifty-five bushels of corn was gathered, being not quite thirteen bushels per acre and one bushel less than on plot No. 3, where the incomplete fertilizer was used and nineteen bushels less than where the complete fertilizer with potash in it was used. This would lead to the conclusion that unless manufacturers will make and put upon the market suitable mixtures, such as are desired, the practical farmer would find it to his advantage to buy the chemicals and mix them in the right proportions.

H. E. VANDEMAN.

**Live Stock and Dairy**

CONDUCTED BY CHARLES WM. BURKETT,  
Professor of Agriculture, N. C. A. & M. College, and Agriculturalist North Carolina Experiment Station.

Inquiries of Progressive Farmer readers cheerfully answered.

**FEEDING AND MANAGEMENT OF LIVE STOCK.****I. Some Important Considerations in Feeding Live Stock.**

It is highly important that the individual who feeds live stock should have a thorough knowledge of the leading principles which govern it, and of the various considerations which have a bearing upon it. Unless one knows how to do things he cannot expect a very successful outcome. So if we do not give heed to known facts that have to do in the control or successful feeding and management of farm animals, we cannot expect those animals to make much progress. We should always bear in mind that in successful feeding there must not only be favorable progress in gains from week to week and from month to month, but these gains must be economically made. One of the most important factors that is concerned with successful feeding of live stock, is that animals must possess quality if they are to be fed with marked success, and by quality we mean what might generally be included in the consideration of the breeding, the form, and the handling of the individual. Animals lacking in quality will usually be fed unprofitably in proportion to the degree to which the lack is present. We are feeding a large number of cattle, sheep and hogs in our State, but they lack quality. Without quality early maturity is not possible, and there is no profit in feeding cattle even on poor lands and cheap pasturage for three or four or five years. Our State will blossom as a rose indeed when we combine our live stock with our other kinds of farming, and when we secure animals possessing quality and early maturity. It is necessary in the successful feeding of farm animals that they have food sufficient for a gradual and constant growth. Over feeding is just as harmful as underfeeding. It is already recognized by every practical feeder that where stagnation occurs before the animals have matured that the feeding quality of the animals is affected adversely. This arises, in part at least, from disarrangement of the equilibrium of the system which permanently impairs the vigorous action of some or all of the powers of digestion. This arrested condition of growth and vigor is in proportion to the length of the period of stagnation due to under-feeding and to its proximity to the birth period. Now the powers of digestion can be affected, especially while the animal is still young, by over-feeding in just the same way that under-feeding does. One specially finds bad effects by the over-feeding of breeding stock and of dairy calves. And then again we find another error in feeding material that do not furnish the proper nutrients and in the proper balanced form. For that reason the mixed diet is always superior to one composed of a single feeding stuff. It is seldom found that any one food will contain within itself the elements of the perfect food. It is true that new milk for young animals, and succulent grasses for older ones are exceptions to this. They are of course impractical to be fed all the time, and hence if we want a successful food for our live stock we must make it a rule to provide the proper feeding stuffs in just the same way that we make it a rule to provide proper fertilizer materials for our cotton, corn, or tobacco when they are started on their way from planting to maturity.

All this means that we must recognize at first that the feeding and growing of farm animals cannot be done by guess, nor can it be done in a half-hearted way. It requires experience, love for the work, and the determination to make a success